

ABSTRACT

A deformable mirror includes a vertical comb actuator having a reflective surface attached thereto. The vertical comb drive includes stationary elements interspersed with moving elements. When a potential difference is provided between these elements, the moving elements are pulled downward, thereby deforming the reflective surface. The vertical comb drive typically includes a plurality of actuators, which are individually electrically addressed. Each actuator may be an array of interspersed elements or a cavity and corresponding tooth. Springs support the moving elements and bias the reflective surface in an original position. The vertical comb drive provides a large stroke and substantially linear voltage-versus-displacement curve throughout the stroke.